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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2195

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,426

Applicant(s)

DOROFEEV ET AL.

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 12 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1 – 4 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.

4. **Claims 1 – 4** are directed to method steps, which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, assigning, allocating, can be practiced mentally in conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter. (The examiner suggests applicant to change “method” to “computer implemented method” in the preamble to overcome the outstanding 35 U.S.C. 101 rejection).

Claim Rejections - 35 USC § 103

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5. Claims 1 - 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over White Paper ("Solaris Resource Manager – Controlling System Resources Effectively", hereinafter White Paper), cited by applicants.

6. Regarding **claim 1**, White Paper discloses a method for allocating a percentage of system resources among a plurality of process groups in a computer system, said computer system comprising a plurality of CPUs, said plurality of CPUs combined into at least one processor set (page 2, paragraph 4, page 5, paragraph 4), said method comprising:

- a. assigning each of said plurality of process groups a number of shares of at least one processor set (page 5, paragraphs 4th, 7th, page 6, paragraphs 1, 2, page 8, paragraph 1 and page 13, paragraph 4, and figs. 2-1 and 3-1); and
- b. allocating said system resources of said at least one processor set to each of said plurality of process groups associated with said at least one processor set according to the number of shares assigned to each of said plurality of process groups associated with said at least one process set (page 5, paragraphs 4th, 7th, page 6, paragraphs 1, 2, page 8, paragraph 1 and page 13, paragraph 4, and figs. 2-1 and 3-1), wherein said allocating system resources comprises using fair-share scheduling (page 12, last paragraph: Solaris Resource manager controls the rate of CPU usage through fir share scheduling).

With respect to the term "at least one processor set", that has been understood and interpreted by the examiner as one processor set in which the processor set can have just one processor or CPU. Therefore, it would have been obvious for one of an ordinary skill

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in the art, at the time the invention was made, to recognize White Paper discloses the allocating of the processor set to the process group as can be seen in fig. 2 - 1.

7. Regarding **claim 2**, White Paper discloses the system resources of each of the at least one processor set are allocated on a number of shares of all active groups within each of the at least one processor set (White Paper: page 4, 2nd paragraph, resource utilization can actually increase because unused capacity is dynamically allocated to active users and applications. Page 5, 4th paragraph: CPU time allocated based on an assigned number of shares, such that when application are idle or are consuming less than their designated CPU allotment, other applications can take advantage of the unused processing power).

8. Regarding **claim 3**, White Paper discloses the percentage of the system resources is calculated based on a ratio of the number of shares assigned to each of the process groups to the number of shares of all active groups within each of the at least one processor set (Page 5, 4th paragraph, page 5, last paragraph, page 6, 1st – 2nd paragraphs).

9. Regarding **claim 4**, White Paper discloses each of the process groups includes only one process (Page 5, last paragraph, page 6, 1st – 2nd paragraphs: Within each group of process groups, there are individual users in which each might be having just one process running. For example, Within Operations Dept, there are Kelvin, Susan and Brian in which one of user might be just having one process running).

10. **Claims 5 - 12** are rejected on the same ground as stated in claims 1 – 4 above.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 5 and 9 have been considered but are moot in view of the new ground(s) of rejection.

12. With respect to applicants' remark that "the examiner has incorrectly equated process groups with groups of users" (page 5, last paragraph – page 6, 1st paragraph), the examiner disagrees. Processes are execute/run by users. Each user can have one or more processes running on the system. Thus, the terms process group and group of users are equivalent in this context. Furthermore, applicants' disclosure stated that the processes can be combined into aforementioned process groups based on various criteria, including, but not limit to, user id of the user executing the process, group id of the user executing the process (specification page 2, lines 18 – 20).

13. With respect to applicants' remark that "White Paper fails to teach allocating system resource using both process groups and processor sets" (page 8, lines 6 – 7), the examiner disagrees. White Paper teaches of the allocating CPU resource to process groups by shares using Solaris Resource Manager which complements a number of products such as processor sets that Sun offers for increasing resource availability (page 2, 2nd paragraph – 4th paragraph).

In addition, in response to applicants' argument that there is no teaching or suggestion about allocating resources using both process groups and processor set together because White Paper alludes to processors sets in one place and separately teaches system resource allocation based on the number of shares assigned to each group

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users (page 8, lines 8 – 12), the examiner disagrees. Because the disclosures of these limitations are in different places, does not mean White Paper does not teach or suggest such features. White Paper clearly discloses of allocating CPU resource in which processor set to applications, in other words, processes (page 5, 4th paragraph: When applications are idle or are consuming less than their designated CPU allotment, other applications can take advantage of the unused processing power. Page 7, 4th paragraph: resources can be allocated for users, groups and applications.)

14. In response to applicant's remark that White Paper fails to teach or suggest the step of assigning each of the process groups a number of shares of at least one processor set (page 6, 4th paragraph), the examiner disagrees. White Paper teaches such limitation in page 5, paragraphs 4th, 7th, page 6, paragraphs 1, 2, page 8, paragraph 1 and page 13, paragraph 4, and figs. 2-1 and 3-1. With respect to the term "at least one processor set", that has been understood and interpreted by the examiner as one processor set in which the processor set can have just one processor or CPU. Therefore, it would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to recognize White Paper discloses the allocating of the processor set to the process group as can be seen in fig. 2 - 1.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Product & Services: Chapter 8 – Fair Share Scheduler and SysAdmin Magazine and Galvin disclosed the allocating of processor set to the plurality of process groups according to the number of shares assigned to each process groups.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

lv
May 13, 2005


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